

VODOLAZSKAYA, I.U.

Poultry as an important source of increased meat production.  
Ptitsevodstvo 9 no.7:20-21 J1 '59. (MIRA 12:10)

1. Sekretar' Novo-Astrakhanskogo raykoma Kommunisticheskoy  
partii Ukrainy, Luganskoy oblasti.  
(Novaya Astrakhan District--Poultry)

VODOLAZSKAYA, L.A.; MOLCHADSKIY, M.T.

Accumulation of raffinose in raffinade wash sirups. Sakh.  
prom. 34 no.1:19-21 Ja '60. (MIRA 13:5)

1. Odesskiy rafinadnyy zavod.  
(Sugar manufacture) (Raffinose)

VODOLAZSKIY, L. A.: Master Biol Sci (diss) -- "Problems of the methods of recording electromyograms and electrocardiograms of the worker during work in production". Moscow, 1959. 10 pp (Acad Med Sci USSR, Inst of Labor Hygiene and Occupational Diseases), 200 copies (KL, No 15, 1959, 115)

Vitamin needs and the determination of the quality of proteins in food products. V. N. Buzin and N. A. Golobinskiy (Vitamin Inst., Moscow). *Biochimiya* 15, 44-51 (1950).--The food value of proteins was stud. in feeding expts. with rats, by a modified method of Cannon and co-workers (C.I. 38, 59379). Wheat, buckwheat, and oats represent the highest quality plant proteins for rats. Rye occupies an intermediate position, whereas millet and corn are of poor quality. Potatoes contain a good quality protein. Nicotinic acid is an effective agent for increasing the food quality of the proteins of rye, millet, oats, and especially of corn. H. Priestley

VODOLAZSKAYA, N. A.

USSR.

A biological method for the determination of riboflavin.  
K. L. Poyabetskaya and N. A. Vodolazskaya, *Trudy  
Vsesoyuz. Nauch.-Issledovatel. Inst. 4*, 131-7  
(1953); cf. *C.A.* 49, 12579g. Groups of young rats (30-40  
g. each) of mixed sexes were fed the following riboflavin-  
free diet: riboflavin-free casein 25%; starch 61%; sun-  
flower-seed oil 8%; fish oil 2%; Osborne and Mendel salt  
mixt. 4%, and 50  $\gamma$  of mixt. of thiamine, pyridoxine, and Ca  
pantothenate. When symptoms of riboflavin avitaminosis  
appeared, the administration of increasing doses of ribo-  
flavin was initiated. The min. therapeutic dose was 0  $\gamma$   
per day. Bioassay results with synthetic and natural  
vitamins proved their identity. D. S. Levina

VODOLAZSKAYA, M.A.

USSR

Riboflavin norms for white leghorn chicks. V. N. Kltsev and N. A. Vodolazskaya. *Trudy Vsesoyuz. Nauch. Issledov. Inst. 4*, 155-8 (1953).—A dry ration containing 0.3 mg. % Riboflavin (I) is an adequate norm for 30-day-old white leghorn chicks. It is sufficient to maintain wt. gain, to protect against ptyalism and to ensure an increase of I in the liver. A higher content of I in the diet serves no practical purpose. A diet of 0.2 mg. % of I effected a wt. gain as effectively as 0.3 mg. %, but its content in the liver was lower. An increase in the cooked protein of the diet from 13.7 to 21.9% raised the gain in wt., but a 10 to 30% increase, while causing no reduction in the wt., adversely affected the well-fed and fattened appearance of the chicks. An increase in the boiled protein of the diet to 62% affected the wt. increase adversely. B. S. Levine

Vodolazskaya, N. A.

USSR J

Chemical and microbiological determinations of riboflavin in plant material. K. L. Povolotskaya and N. A. Vodolazskaya. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Khim. Dzh.* 4, 217-28 (1953); cf. *C.A.* 47, 7679; 49, 12632h. — Pretreatment of the plant material with clarease or polymase is an essential step in riboflavin (V) detn. Penicillinase was equally satisfactory. Treatment of the material with  $\text{KMnO}_4$  is of value but in excess it causes partial decomn. of the vitamin. An excess of  $\text{H}_2\text{O}_2$  in the elimination of the  $\text{KMnO}_4$  must also be avoided.  $\text{PbCl}_2$  and Na dithionite increase the I and clarify the ext. The following chem. method is proposed for the detn. of V in plant material: grind 5-10 g. of test material in a small vol. of 0.1N  $\text{H}_2\text{SO}_4$ ; wash into a 100-ml. flask with the  $\text{H}_2\text{SO}_4$  to a vol. of 75 ml.; heat in boiling water bath for 45 min.; cool to 40°; add satd. soln.  $\text{AcONa}$  to pH 4.5; add clarease or penicillinase at the rate of 0.03 g./g. of dry material; keep at 37° for 12-16 hrs.; bring vol. to 100 ml.; filter; take two 8-ml. aliquots; bring one to 10 ml. for the detn. of degree of fluorescence directly; to the other aliquot add 4%  $\text{KMnO}_4$  until no color change (0.5-1.0 ml.); let stand for 10 min.; add 8%  $\text{H}_2\text{O}_2$ , drop at a time, until pink color disappears; add 0.2 ml. 0.05%  $\text{SnCl}_2$  and 0.1 ml. 2.5% Na dithionite; leucoriboflavin is formed; shake for 20 min.; bring vol. to 10 ml.; filter. Now, dissolve 10 mg. cryst. I in 250 ml.  $\text{H}_2\text{O}$ ; this standard stock soln. will keep in the dark for one month. Use 1 ml. of this stock + 99 ml.  $\text{H}_2\text{O}$  for standard of comparison. — Det. degree of fluorescence of aliquots 1 and 2 and of standard; now, add to all 0.1 g.  $\text{NaHCO}_3$  and

*N. J. Prusotskyan*

0.1 g. Na dithionite. The fluorescence in the standard becomes extinguished, but not in the test aliquots. Det. degree of fluorescence in the latter. For calcn. of results use the following formula:  $x = 0.4B(A - E)/CD$  where  $x =$  % in % of test material;  $A =$  reading of fluorometer for test solns.;  $B =$  fluorometer reading after the addn. of the  $\text{NaHCO}_3$ ;  $C =$  reading of fluorometer for standard;  $0.4 =$  % concn. of standard;  $D =$  wt. in g.;  $E =$  dila. in ml. The microbiol. method is based on the fact that *Lactobacillus casei* grows well only in a medium contg. 0.005-0.5 % I per ml. of medium. The procedures for maintenance of *L. casei* and the method for I detn. are described. In this method a 48-hr. incubation period is recommended. Final results are obtained by titration of the formed lactic acid. In only a few plant materials does the microbiol. method yield higher results. Generally, the chem. and microbiol. methods give comparable results. B. S. Levine



NIKOLAYEV, R.P.; POVOLOTSKAYA, K.L.; VODOLAZSKAYA, N.A.

Biological value of different concentrates and preparations of vitamin  
C. Biokhimiya 18, 169-74 '53. (MLRA 6:4)  
(CA 47 no.17:8855 '53)

1. Vitamin Inst., Moscow.

KIRSANOVA, V.A.; VODOLAZSKAYA, N.A.

Studying the effect of the folic acid antagonist 4-aminopteroyl-  
aminoadipic acid on the development of transplanted leukemia in mice.  
Vop.onk. 1 no.4:59-64 '55. (MLRA 10:1)

1. Iz laboratorii eksperimental'noy khimioterapii (zav. chlen-korr.  
AMN SSSR prof. L.F.Iarionov) i laboratorii biokhimii Instituta ekspe-  
rimental'noy patologii i terapii raka AMN SSSR (dir. - chlen-korr.  
AMN SSSR prof. N.N.Blokhin) Adres avtorov: Moskva, 3-ya Meshchanskaya  
ul., d.61/2, Korp. 9, Institut eksperimental'noy patologii i terapii  
raka.

(FOLIC ACID ANTAGONISTS, effects,  
4-aminopteroylaminoadeptic acid, on exper. leukemia)  
(LEUKEMIA, experimental,  
eff. of 4-aminopteroylaminoadeptic acid)

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860330001-9

/ The action of the government is to be a new title

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860330001-9"

VODOLAZSKAYA, N.A.

Antitumor action of some derivatives of sarcolysine and closely related compounds. Vop.onk. 7 no.5:77-84 '61. (MIRA 15:1)

1. Iz laboratorii eksperimental'noy khimioterapii (zav. - chl.-korr. AMN SSSR L.F. Larionov) Instituta kesperimental'noy i klinicheskoy onkologii AMN SSSR (dir. - deystv. chl. AMN SSSR N.N. El.okhin).

(SARCOLYSINE)

(CYTOTOXIC DRUGS)

USSR/General Problems of Pathology - Experimental Therapy.

U-3

Abs Jour : Ref Zhur - Biol., No 16, 1958, 75497

Author : Vodolazskaya, N.A., Novikova, M.A., Shkodinskaya, Ye.N.,  
Vasina, O.S., Berlin, A.Ya., Larionov, L.F.

Inst : -

Title : On the Antineoplastic Activity of Some Sarcolysine Deriva-  
tives (dl-n-gu-(2-chloroethyl)-aminophenylalanine.

Orig Pub : Byul. eksperin. biol. i med., 1957, 44, No 11, 76-81

Abstract : Toxic and antineoplastic action (on sarcoma of 45 rats)  
of 4 sarcolysine derivatives was studied: Ethyl- (I) and  
isopropyl (II) ethers of dl-sarcolysine, dl-N-formylsarco-  
lyzine (III) and dl-N-acetylsarcolysine (IV). It was de-  
monstrated that I and II are very similar to sarcolysine  
in toxicity and antineoplastic activity. III and IV are  
less toxic and their antineoplastic action is weaker.  
In order to obtain an effect close to that of sarcolysine,

Card 1/2

USSR/General Problems of Pathology - Experimental Therapy.

U-3

Abs Jour : Ref Zhur - Biol., No 16, 1958, 75497

it is necessary to take a dose of III 25 times larger than that of sarcolysine (it often produces partial death of animals), and of IV only  $1\frac{1}{2}$  to 2 times as large. --  
O.V. Zubova.

Card 2/2

- 15 -

VODOLAZSKIY, G., inzh.; KULIKOV, N., inzh.

Learning to use rotary kilns equipped with conveyor calcinators.

Stroi. mat. 3 no.12:9-12 D '57.

(MIRA 11:2)

(Kilns, Rotary)

VODOLAZSHIY, G.I.

Reconstruction of rotary kilns. TSement 28 no16:19-20 H-D '62.  
(MIRA 15:12)

1. TSementnyy zavod "Oktyabr'".  
(Kilns, Rotary)



VODOLAZSKIY, L.A.

Making electrograms of workers during work in industry. Biul. eksp.  
biol. i med. 43 no.1 supplement:59-61 '57. (MLRA 10:3)

1. Iz laboratorii fiziologii truda (zav. - doktor biologicheskikh  
nauk professor S.A.Kosilov) Instituta gigiyeny turda i professional'-  
nykh zabolevaniy AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof.  
A.A.Letavet) Predstavlena deystvitel'nyy chlenom AMN SSSR V.N.  
Chernigovskim)

(ELECTROCARDIOGRAPHY,

eff. of work, registration in workers during labor)

(ELECTROMYOGRAPHY

same)

VODOLAZSKIY, L.A.; ZOLINA, Z.M.; KOSILOV, S.A.

Electromyographic investigation of muscular activity in man during  
prolonged industrial work. *Fiziol.zhur.* 45 no.9:1045-1052 S '59.  
(MIRA 13:1)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR, Moskva.  
(FATIGUE physiol.)  
(ELECTROMYOGRAPHY)

VODOLAZSKIY, L.A.

Significance on interelectrode resistance during the registration of bioelectric processes from the skin surface in humans. Biul. eksp. biol. i med. 48 no.10:94-97 0 '59. (MIRA 13:2)

1. Iz laboratorii fiziologii truda (zav. - doktor biol.nauk S.A. Kosilov) Instituta gigiyeny truda i profzabolevaniy (dir. - deystvitel'nyy chlen AMN SSSR A.A. Letavet) AMN SSR, Moskva. Predstavlena deystvitel'nyy chlenom AMN SSSR A.A. Letavetom.  
(SKIN physiol.)

BERG, A.I., akademik, red.; VODOLAZSKIY, L.A., red.; SHAMSHUR, V.I.,  
red.; LARIONOV, G.Ye., tekhn.red.

[Electronics in medicine] Elektronika v meditsine. Pod red.  
A.I.Berga. Moskva, Gos.energ.izd-vo, 1960. 391 p.

(MIRA 14:2)

1. Akademiya nauk SSSR. Vsesoyuznyy nauchnyy sovot po radio-  
fiziko i radiotekhnike.

(ELECTRONICS IN MEDICINE)

VODOLAZSKIY, L.A., PODOBA, YE. V., AND SOLOVYEVA, V.P.

Institute of Labor Hygiene and Professional Diseases,  
Academy of Medical Sciences USSR, Moscow - "Further  
development of the method of recording of electro-  
cardiograms and electromyograms of a worker during  
work in the factory" (17)

Report to be submitted for the 4th Intl. Conf. on  
Medical Electronics, New York N.Y., 16-21 July 1961

VODOLAZKIY, L.A.; POBORA, Ye.V.; SOLOV'YEVA, V.P.

Use of the TEK-1 tele-electrocardiograph in studies of the  
physiology of work. Trudy VNIMIO no.3:146-147 '63  
(MIRA 18:2)

VODOLAZSKIY, Leonid Alekseyevich, kand. biol. nauk; STAROSTENKOVA,  
M.M., red.; ATROSHCHENKO, L.Ye., tekhn. red.

[The body speaks; how and why the biocurrents of the body are  
studied] Organizm rasskazyvaet; kak i dlia chego izuchaiut bio-  
toki organizma. Moskva, Izd-vo "Znanie," 1962. 31 p. (Novoe v  
zhizni, nauke, tekhnike. VIII Seriya: Biologiya i meditsina,  
no.12) (MIRA 15:9)

(ELECTROPHYSIOLOGY)

VODOLAZSKIY, N.G.; RACHKO, A.A., glavnyy bukhgalter; NAZARUK, Ye.S.

On a business accounting basis. Put' i put.khoz. no.1:14-16  
Ja '59. (MIRA 12:2)

1. Nachal'nik Brestskoy distantzii puti Belorusskoy dorogi  
(for Vodolazskiy) 2. Starshiy inzh. Brestskoy distantzii  
puti Belorusskoy dorogi (for Nazaruk).  
(Railroads--Track) (Railroads---Cost of operation)



VODOLAZSKIY, N.P.; KOTOV, L.I.; KOSOV, N.P.

Automatic control of the IA616 screw-cutting lathe. Stan.i  
instr. 33 no.11:38-40 N '62. (MIRA 15:11)  
(Lathes--Numerical control)

VODOLAZSKIY, N.P., inzh.; KOSOV, N.P., inzh.

· Continuous mechanized line for machining stepped rolls on lathes.  
Vest.mashinostr. 42 no.9:59-63 S '62. (MIRA 15:9)  
(Lathes)

VODOLAZSKIY, P. I., master

Change in the seals of the airpipes of 220 kv. air switches.  
Energetik 10 no.8:15-16 Ag '62, (MIRA 15:10)

(Electric switchgear)

VODOLAZSKIY, P.I., master

Concerning the defects of 35 kv. air switches. Energetik 11  
no.3:16-17 Mr '63. (MIRA 16:4)

(Electric switchgear) (Electric cutouts)



L 13782-65

ACCESSION NR: AP4044094

bility-theory definition is formulated for the antenna directivity pattern and its optimal value determined. The conclusions are:

1. Optimal antenna directivity patterns for monopulse phase radars exist and minimize the error in the determination of the target angle. 2. The use of optimal directivity patterns for an accurate determination of the target angle reduces the mean square error relatively little -- by not more than 20%. 3. The use of optimal directivity patterns to determine the sign of the angle makes it possible to reduce error probability by a factor of 4--5. Orig. art. has: 7 figures and 38 formulas.

ASSOCIATION: none

SUBMITTED: 25Mar63

ENCL: 00

SUB CODE: DC, EC

NO REF SOV: 001

OTHER: 002

Card 2/2

L 47389-66 EWT(1)/T/FSS-2 WR

ACC NR: AR6025791

SOURCE CODE: UR/0058/66/000/004/H044/H044

AUTHOR: Vodolazskiy, V. I.; Terpugov, A. F.

TITLE: Optimal antennas for monopulse radar 24

SOURCE: Ref. zh. Fizika, Abs. 4Zh304

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 171-206

TOPIC TAGS: antenna directivity, monopulse radar, diversity radar, mean square error, error minimization

ABSTRACT: The following problem is considered: What should the shape of the directivity pattern of an antenna system for a monopulse radar be in order that the rms error in the determination of the angular coordinates of the target, and also its range and velocity, be minimal in some sense. Monopulse radars are investigated in which the determination of the target angle is carried out by comparing the phases of reflected signals at the output of two spatially-separated antenna systems with identical directivity patterns. Only the plane case is considered, when the angular position of the target is characterized by only one angle. It is found that rational shaping of the directivity patterns of the radar antennas can reduce by a factor of several times the error in the determination of the target, its range, and velocity. G. Malushkov. [Translation of abstract]

SUB CODE: 09

Card 1/1 hs

ACC NR: AR6026491

SOURCE CODE: UR/0274/66/000/004/A040/A040

AUTHOR: Vodolazskiy, V. I.; Terpugov, A. F.

TITLE: Optimal antennas in single-pulse radars

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A266

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 171-206

TOPIC TAGS: radar, single pulse radar, radar antenna, antenna directional pattern

ABSTRACT: This problem is considered: Which shape the antenna directional pattern in a single-pulse radar must have in order that the mean-square error, in determining the target angle and target range and speed, be minimal. The single-pulse radars are investigated in which the target angle is determined from a comparison of echo-signal phases at the outputs of two space-separated antennas having identical directional patterns. Only the planar case, in which the angular target position is defined by one angle, is considered. A rational shaping of the directional pattern can reduce the error in determining the target angle, range, and speed by several times. Bibliography of 9 titles. G. M. [Translation of abstract]

SUB CODE: 17

Card 1/1

UDC: 621.396.677.861:621.396.96



VODOLZAKIN, V.M.

Hardness characteristics of thawed clay soils at various stages of  
consolidation. Trudy SOIM no.2:66-72 '62. (MIRA 17:1)

VODOPALAS, A.I.

Bird's foot trefoil, a good component of grassland mixtures.  
Zemledelie 8 no.9:71-72 S '6G. (MIRA 13:8)  
(Bird's foot trefoil)

VODOP'YANOVA, T. D.

Judas Tree - Crimea

Judas Tree (*Cercis siliquastrum* L.) in Crimea. T. D. Vodop'yanova. Bot. mat. Gerb. 14, 1951.

Monthly List of Russian Accessions, Library of Congress, November 1952.  
Unclassified.

TOMIC-KAROVIC, Krunoslava; SKALOVA, Radmila; ZAGAR, Zivojin; UGRICIC, Renka;  
VODOPIJA, Alemka

The problem and appearance of resistance strains of Staphylococcus  
pyogenes. Rad. med. fak. Zagreb 8 no.1:5-25 '60.  
(STAPHYLOCOCCUS pharmacol) (ANTIBIOTICS pharmacol)

VODOPIJA, I.

Tropical diseases in our practice. Liječn. vjesn. 84 no.9:935-937  
'62.

(TROPICAL MEDICINE)

VODOPIJA, I.

Typhus — an endemic quarantine disease in this country. Liječn.  
vješt. 84 nq:10:1039-1042 '62.  
(TYPHUS)

VODOPIJA, I.

Epidemiology of typhoid fever — old and new problems. Liječn.  
vjesn. 85 no.7:771-774 '63.

(TYPHOID) (EPIDEMIOLOGY)

✱

YUGOSLAVIA

VODOPIJA, Dr I. [affiliation not given].

"Epidemics of Typhoid Fever, an Old and New Problem."

Zagreb, Lijecnicki Vjesnik, Vol 85, No 7, July 1963, pp 771-774.

Abstract: The author discusses the 1963 epidemic in Switzerland, the 1962 outbreak in a US youth camp in Federal Germany, the 1962 epidemic in Saskatchewan, and periodic outbreaks in Zagreb and Yugoslavia (the most recent having been traced in 1962 to a Zagreb pastry shop). He states that the methods of the Swiss authorities on Zermatt, viz., closure of hotels (making it possible for the departed vacationers to spread the epidemic), are outmoded. Strict control over water supply, food, and potential contacts makes it possible to curb an epidemic effectively with much lower costs and losses.

Eighteen Yugoslav and Western references.

1/1

- 5 -



NAJMAN, Emil, dr.; REINER, Zeljka, dr.; KOSUTIC, Zvonimir, dr.; BREITENFELD, Vladimir, dr.; VODOPIJA, Ivan, dr.\_\_\_\_

Salmonella java infection in children. Lijecn. vjecn. 84 no.6:553-555 '62.

1. Iz Dječjeg odjela Opće bolnice "Dra M. Stojanovica", Bolnice za zarazne bolesti u Zagrebu i Zavoda za zaštitu zdravlja grada Zagreba.  
(SALMONELLA INFECTIONS in inf & child)

VODOPIJA, Ivan, dr.; TOMPAK, Biserka, dr.; SKALOVA, Radmila, dr.;  
HELLENBACH, Helena, dr.

Isolation of *S. typhi abdominalis* from well water by the membrane  
filtration method during the epidemic of typhoid fever in the village  
Bratini in 1960. Liječni. vjesn. 83 no.12:1241-1244 '61.

1. Iz Gradskog zavoda za zdravstvenu zaštitu, Skole narodnog zdravlja  
"A. Stampar" i Bolnice za zarazne bolesti u Zagrebu.

(TYPHOID transm) (WATER SUPPLY microbiol)

VODOPIJA, Ivan, dr.; BUJEVIC, Aldo, dr.; MADJARIC, Drago, dr.; MIKIC, Fedor, dr.;  
CVORISCEC, Tomislav, dr.

Determination of spreading of an epidemic with a rapid individual  
"filter" survey. Lijecn. vjesn. 83 no.12:1261-1267 '61.

1. Iz Zavoda za zdravstvenu zastitu grada Zagreba i NR Hrvatske, Skole  
narodnog zdravlja "Andrija Stampar" i Sanitarnog inspektorata NO grada  
Zagreba.

(HEALTH SURVEYS) (EPIDEMIOLOGY)

KOSUTIC, Zvonimir, dr.; REINER, Ivan, dr.; BREITENFELD, Vladimir, dr.;  
MILIC, Nedjeljko, dr.; PIEROTIC, Nevenka, dr.; SEKSO, Mladen, dr.;  
SOLJAN, Nevenka, dr.; TRNSKI, Josip, dr.; VODOPIJA, Ivan, dr.

Clinical characteristics of salmonellosis java in adults. Lijecn.  
vjesn. 84 no.5:437-444 '62.

1. Iz Bolnice za zarazne bolesti, Internog odjela bolnice "Dra M.  
Stojanovica" u Zagrebu i Zavoda za zastitu zdravlja grada Zagreba.

(SALMONELLA INFECTIONS case reports)

5

YUGOSLAVIA

Dr Ante HRABAR and Dr Iva VODOPZLA, State Institute of Health  
(Republički zavod za javno zdravstvo) and City Institute of Health  
(Zavod za javno zdravstvo grada), Zagreb.

"Epidemic of Typhoid Fever Spread by a Pastry Shop."

Zagreb, Liječnički Vjesnik, Vol 84, No 12, Dec 62; pp 1209-1216.

Abstract [English summary modified]: An epidemic in Medveščak, one of the better quarters of Zagreb, in summer 1961, very frustrating epidemiologic sleuthing finally traced it to a bricklayer neighbor of one of the milk suppliers of a pastry shop in the neighborhood; this summer the bricklayer was building his own barn so he did not leave for seasonal work as in other years. Over 100 cases of typhoid fever all the way back to 1938 had apparently been due to the same source. Diagram, table, 8 Yugoslav references.

VODOPIJA, Ivan, dr.; BARIC, Ljubo, dr.; SUBAJKOVIC, Mirajana, dr.; TOMPAK, Biserka, dr.; ALERAJ, Dora, dr.; KOSUTIC, Zvonimir, dr.; BREITENFELD, Vladimir, dr.

Salmonellosis java epidemic in a Zagreb hospital. Lijecn. vjesn. 84 no.4:331-338 '62.

1. Iz Zavoda za zastitu zdravlja grada Zagreba, Internog odjela Opce bolnice "Dra M. Stojanovica", Zavoda za zastitu zdravlja NR Hrvatske i Bolnice za zarazne bolesti u Zagrebu.

(SALMONELLA INFECTIONS epidemiol)

YUGOSLAVIA

Dr I. VODOPITJA [Affiliation not given]

"Typhus - An Infectious Quarantine-Liable Disease in Our Country."

Zagreb, Ljecnicki Vjesnik, Vol 84, No 10, Oct 1962; pp 1039-1042.

Abstract: Exhortatory editorial reviewing the situation of endemic typhus in Yugoslavia and stressing need for rapid elimination, citing difficulties and possibilities. Most of 26 references are Yugoslav.

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VODOPIJA, Ivan, dr.

Immunization with live polio vaccine. Liječn. vjesn. 84 no.6:545-551  
'62.

1. Iz Zavoda za zdravstvenu szatitu grada Zagreba.  
(POLIOMYELITIS immunol) (VACCINATION)



TOMASEGOVIC, Z.; JANKOVIC, Z.; PETKOVIC, V.; STANIC, M.; BETLHEIM, S.; BLAZEVIC,  
D.; PERSIC, N.; ZORINC, S.; TEODOROVIC, B.; VRANCIC, J.; VODOPIJA, I.;  
ANTONIAZZO, Z.; CULIC, R.; GALINOVIC-WEIEGLASS, M.; ~~PERKOV, Z.~~  
MRAVUNAC, B.; KOEHLER-KUBELKA, N.; CEZNER, M.; KOHN, V.; TEKAVCIC, B.;  
EMILI, H.; SMERDEL, S.; SOOS, E.; VUKSANOVIC, V.; JANJATOVIC, M.;  
DERVISEVIC, I.; GRUENWALD, P.; SKRABALO, Z.; CREPINKO, I.; HAUPTMANN,  
E.; VIDACEK, S.; HORVAT, A.; MIOCKA, O.; IVANCEVIC, D.; PERGER, A.;  
KRSNJAVI, B.; PRAZIC, M.; SALAJ, B.; SUBOTIC, R.; RADOSEVIC, Z.; KELER-  
BACOKA, M.; HAHN, A.; MATKOVIC, B.; RADONIC, M.

Reveiw of periodicals; medicine. Bul sc Youg 9 no.4/5:145-147  
Ag-O '64.

YUGOSLAVIA

Epidemiology

VODOPIJA, Ivan, Dr: Secretary of Public Health and Social Welfare of the City of Zagreb (Sekretarijat za narodno zdravlje i socijalnu zastitu grada Zagreba), Zagreb.

" German Measles in Zagreb"

Zagreb, Lijecknicki Vjesnik, Vol 88, No 2, 1966, pp 125-134

Abstract [Author's summary modified]: Statistical analysis of over 10,000 notifications in the period 1952 to 1964 show that German measles appear in periodic cycles from 5 to 7 years as a spring-time disease predominantly affecting school children. No increase in congenital malformations was observed. During the outbreaks in 1962 and 1963, German measles seemed to attack the same persons in two consecutive years, indicating that the immunity following the disease may not be long - lasting or that there may be more than one type of causative agent. Tables and graphs. 1 Yugoslav and 55 Western references. Received for publication 23 September 65.

VODOPIJA, Janko, Dr.; TOMPAK, Biserka, Dr.

Epidemiological considerations on diseases caused by *Salmonella* blockley. Lijec vjes 82 no.9/10 '60.

1. Iz Higijenskog zavoda grada Zagreba  
(SALMONELLA INFECTIONS epidemiol)

PLANIC, Radoslav, ing. (Zagreb); VODOPIJA, Zeljko, dipl. ec. (Zagreb)

Characteristics of investment in 1960. Energija Hrv 10 no. 5/6:171-172  
'61.

1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb, Proleterskih brigada 37. 2. Clan Urednickog odbora, "Energija," urednik rubrike "Izgradnja elektroenergetskih postrojenja" (for Planic).

PLANIC, Radoslav, inz.; VODOPIJA, Zeljko, dipl. inž.

Characteristics of the investments in electric-power engineering  
in 1961. Energija Hrv 11 no.5/6:166-167 '62.

1. Zajednica elektroprivrednih poduzeća Hrvatske (Zagreb,  
Proleterskih brigada 37). 2. Član Uredničkog odbora, "Energija"  
(for Planic).

K. Cazafura; PAVKO, D.; SIRCA, F.; KERSNIC, Viktor, prof. dr. inz.;  
KOSAK, K.; GRAFENAUER, S.; PODGORNİK, A.; KERNC, J.; DOBOVISEK,  
Bogomir, docent, dr. inz.; GCEPEK, Drago, docent, dr. inz.;  
HOMAN, A.; MARCEC, M.; RANKEL, J.; CRNIVEC, M.; SMAJIC, N.;  
CUCEK, I.; KERSNIC, V., ml.; VODOPIVEC, F.

New books. Rud met zbor no. 2:144-187 '63.

1. Glavni urednik, "Rudarsko-metalurski zbornik" (for Viktor Kersnic).
2. Clani Uredniskega odbora, "Rudarsko-metalurski zbornik" (for Dobovisek and Gcepek).

VODOFIVEC, Franc, dr inz., saradnik (Ljubljana, Lepi pot 11)

Influence of phosphorus on the morphology of oxide layers in  
the surface oxidation of pure iron. Tehnika Jug 19 no.1:Suppl:  
Radioizotopi zrac 3 no.1:33-37 Ja '64.

1. Metalurški institut u Ljubljani.

Y/001/63/000/001/003/004  
D267/D308

AUTHOR: Vodopivec, Franc

TITLE: Application of radioactivation for the quantitative study of the enrichment of iron surface with arsenic

PERIODICAL: Tehnika, no. 1, 1963, 25-31 (Radioaktivni izotopi i zračenja, v. 2, no. 1, 1963, RI1-RI7)

TEXT: The lesser affinity to oxygen of arsenic compared with iron results in a high enrichment with arsenic of a thin metal layer at the iron-oxide-steel boundary: on the other hand it is known that an As content in excess of ca. 0.3% has a detrimental effect on the mechanical working of steel. The distribution of As in the enriched layer was determined by using  $^{76}\text{As}$ . Ferrous alloy specimens with 0.075% As were oxidized and then irradiated for 3-6 days in a nuclear reactor. Owing to its greater effective cross section, As underwent more intense activation than Fe. Next metal layers of ca.  $1\ \mu$  were dissolved anodically, both from the outer surface of the specimens, and from the inner surface of the oxide

Card 1/2



Y/001/63/000/001/003/004  
D267/D308

# Application of radioactivation ...

film which had been carefully detached from the metal. The bath used consisted of  $\text{CH}_3\text{COOH}$  and  $\text{HClO}_4$ . As was then precipitated as sulphide, using  $\text{MoS}_3$  as the main precipitate. By comparing the count rate of these two precipitates with that of the standard precipitate obtained from the original alloy, the As contents were determined. It was found that all of the As in the oxidized metal layer is concentrated in the enriched metal layer at the metal/oxide boundary. The As distribution curves taken after oxidation at 800 and 1000°C differ from one another. In the former case they resemble the diffusion curves in systems with complete solubility in solid state; in the latter they resemble the diffusion curves in systems with limited solubility in solid state. There are 9 figures and 5 tables.

ASSOCIATION: Metalurški institut u Ljubljani (Metallurgical Institute, Ljubljana)

Card 2/2

VODOPivec, Franc, dr. 4.

Microstructural characterization of grey cast iron welded with  
the EK nickel electrode. Paper no. 4/5:13-179 '62.

1. Metallurgical Institute, Ljubljana.

VODOPIVEC, Franc

Effect of smaller admixtures of arsenic and phosphorus on  
iron oxidation. Rud met zbor no.1:15-31 '63.

VODOPIVEC, Franc, dr. inz. (Ljubljana, Lepi pot 11)

Desulfuration: at the beginning of surface oxidation of  
the iron alloyed with 0.001% of radioactive sulfur.  
Technika Jug 18 no.4: Suppl.: Radioizotopi zrac 14 no.4:625-629  
Ap'63.

1. Saradnik Metalurskog instituta, Ljubljana.

VODOPIVEC, Frano, dr. inž.; MEGUSAR, Janez, dipl. inž. metalurgija

Effect of the nonoxidized aluminum and nitrogen content on  
the austenitic grain size in iron and steel. Rud met zbor 3:  
297-305 '64.

1. Metallurgical Institute, Ljubljana, Lepi pot 11.

CA

Potassium and carbohydrate metabolism in diabetes mellitus. V. Dolista and M. Vodojarec (Univ. Zagreb, Yugoslavia). *Gastroenterologia* 76, 270-84 (1960, 51).—Lability of serum K level produced in controlled diabetics by administration of 0.0110 g./kg. of acetylcholine, is reduced by addn. of hydergin (0.0102 mg./kg.) and elimination of K is reduced to a very small amt. Against hydergin lead. to greater lowering of blood sugar and reduction of the glycosuria. The insulin effect is enhanced. The sole administration of hydergin (0.0147 mg./kg.) produces the same effect in acetylcholine-sensitive diabetics. R. B. P

CA

117

The effect of glucose and hydergin level on clotting time in man. M. Volodine and N. Jelavic (Med. School, Zagreb, Yugoslavia). *Acta Haematol.* 4, 303-73 (1950). Ingestion of glucose (I) reduced coagulation time in a degree related to the initial clotting time and existing tendencies to fast or slow coagulation. A rise in I concn. in *vitro* corresponding to that following its ingestion did not alter the plasma prothrombin and thrombin times. Parenteral administration of the hydrogenated ergot alkaloids dihydroergocornine, dihydroergocristine, and dihydroergokryptine inhibited the hyperglycemia following I ingestion, but did not prevent the decrease in clotting time. Parenteral administration of hydergin alone reduced clotting time which persisted up to 6 1/2 hrs.

Ruth B. Pitt

VODOPIVEC, Franc, dr inz., saradnik (Ljubljana, Lepi pot 11)

Use of autoradiography in metal testing. Tehnika Jug 19  
no.3:Suppl:Radioizotopi zrac 3 no.3:419-428 Mr '64.

1. Metallurgical Institute, Ljubljana.



VODOPIVEC, Franc, dr inz. (Ljubljana, Lepi pot II)

Use of radioactivation in the quantitative analysis of iron  
surface dressing with arsenic. Tehnika Jug:Suppl.: Radioizotopi  
zrac 2 no.1:25-31 Ja '63.

1. Saradnik Metalurskog instituta u Ljubljani.

SIRCA, F.; DOBOVISEK, Bogomir, docent, dr. inz.; GRAFENAUER, S.; KOSOVINC, I.;  
HAMRLA, B.; VODOPIVEC, F.; KUSCER, D.; KERNIC, J.; DROBNE, F.;  
PAVKO, D.; CAZAFURA, K.; TURK, St.; OCEPEK, Drago, docent, dr. inz.;  
ROSINA, A.; ZUMER, M.; SOVINC, I.

New books. Rud met zbor 4:431-457 '63.

1. Clanovi Uredniskega odbora, "Rudarsko-metalurski zbornik"  
(for Dobovisek and Ocepek).

VODOPIVEC, S.

Yugoslavia (430)

Technology

Medical treatment of hypodermosis and its economic importance. p. 197, Nova Proizvodnja, Vol. 2, no. 2/4, August 1951.

East European Accessions List, Library of Congress, Vol. 2, No. 3, March 1953. UNCLASSIFIED.

VODOPIVEC, V.

Yugoslavia (430)

General - Serials

Some observations on the problem of the relationship between church and state. p. 11. NASI RAZGLEDI. (Tiskovni konzorcij "Ljudske pravice") Ljubljana. (Illustrated fortnightly on political, economic, and cultural problems), Vol. 1, no. 10, July 12, 1952.

East European Accessions List. Library of Congress, Vol. 1, no. 13, November 1952.  
UNCLASSIFIED

VEKSLER, V.J.; VODOPJANOV, A.F.; JEFREMOV, D.V.; MINC, A.Z.; VEISBEIN, M.M.;  
GASEV, M.G.; ZEJDLIC, A.J.; IVANOV, T.P.; KOLOMENSKIJ, A.A.; KOMAR, E. G.;  
MALYSEV, J.E.; MONOSZON, M.A.; NEVJAZSKIJ, J.Ch.; PETUCHOV, V.A.;  
RABINOVIC, V.A.; RUBCINSKIJ, S.N.; SINEVNIKOV, K.D.; STOLOV, A.M.;  
KULT, Karel, inz.

The synchrotron for particle acceleration to 10 BeV energy of the  
Soviet Academy of Sciences. Jaderna energie 3 no.1:5-9 Ja '57.

1. Ustav jaderne fysiky (for Kult).

BC

13-11-2

Forced fermentation of tobacco. VODOLANOV and ANTONIADI (Dobrovo, 1938, No. 4, 25-26). Forced fermentation, e.g., at 50°, yields the same quality of tobacco as does the normal process, provided the raw material is suitable. Ch. Abs. (p)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

LIST AND 2ND ORDER										PROCESSING AND PROPERTIES INDEX										1ST AND 4TH ORDER									
<p>18</p> <p>Forced fermentation of tobacco. Vodop'yanov and Antoniad. <i>Tabachnaya Prom.</i> 1915, No. 4, 25-26. The forced fermentation, e. g., at 50°, yields the same quality of tobacco as that carried out under normal conditions, provided that the raw tobacco was of the proper quality. A. A. Boetlingk</p> <p>17</p>																													
<p>ASH-3LA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
1ST AND 2ND ORDER										3RD AND 4TH ORDER										5TH AND 6TH ORDER									
1ST AND 2ND ORDER										3RD AND 4TH ORDER										5TH AND 6TH ORDER									

VODOP'YANOV, A.

Experience in casting low-sulfur iron. Mor. 1 rech.flot 14 no.8:  
31 Ag '54. (MLRA 7:8)  
(Iron founding)



VODOP'YANOV, A.A.; FUTLIKOV, V.A.

Modernization of the set of horizontal broaching machines.  
Biul. tekhn.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekhn.  
inform. 17 no.4:25-27 Ap '64. (MIRA 17:6)

VODOP'YANOV, A.A.

The 7B510 horizontal broaching machine. Mashinostroitel' no.7:  
19 J1 '63. (MIRA 16:9)

(Broaching machines)

VODOP'YANOV, A.A.; GLEKOV, S.F.

Protective ball clutch. Mashinostroitel' no.9:28 S '62.  
(MIRA 15:9)  
(Clutches (Machinery))

GLEKOV, S.F.; VODOP'YANOV, A.A.

Continuous horizontal broaching machine. Biul.tekh.-ekon.inform.-  
Gos.nauch.-issl.inst.nauch. i tekhn.inform. no.4:41-43 '62. (MIRA 15:7)

(Broaching Machines)

VODOP'YANOV, A.A.

Mechanism for accelerating the exchange of cutting tools.  
Mashinostroitel' no.11:21 N '63. (MIRA 16:11)

37907

S/193/62/000/004/008/008

AC04/A101

11100

AUTHORS: Glekov, S. V., Vodop'yanov, A. A.

TITLE: Continuous horizontal broaching machines

PERIODICAL: Byulleten'tekhniko-ekonomicheskoy informatsii, no. 4, 1962, 41-43

TEXT: The Special Designing Bureau of the Belorussian Sovnarkhoz has developed a range of continuous horizontal broaching machines. The machines, having a broaching force of 10, 5 and 2.5 tons respectively, were manufactured and tested by the Minskiy stankostroitel'nyy zavod (Minsk Machine Tool Plant) im. Kirov in 1961 and are intended for working outer surfaces of different shape and size by broaching. In contrast to the ordinary models, these continuous broaching machines have no idle reverse stroke, the carriage does not stop prior to and after machining of each component, and loading is effected during operation. The broaching machines here described have a capacity of 500 - 2,500 components per hour depending on the broaching speed. The authors present a brief description of the machine operation and give the following technical specifications:

Card 1/2

S/193/62/000/004/008/008  
A004/A101.

Continuous horizontal broaching machines

Parameters	Model		
	7581	7582	7583
Rated tractive force, tons	2.5	5	10
Maximum broaching length, mm	1,050	1,500	2,100
Length and width of carriage, mm	186 x 260	130 x 265	175 x 300
Number of carriages	19	23	25
Broaching speed (8 stages), m/min	2.5 : 12.5	2.3 : 11.5	2.4 : 12
Main driving motor power at 1500rpm, kW	4.5	10	20
Overall dimensions, mm:			
Length (without conveyer)	3,025	3,525	4,350
Width	1,040	1,160	1,240
Height	1,175	1,215	1,445
Weight, kg	3,230	4,390	5,880

There are 2 figures.  
Card 2/2

ACCESSION NR: AP4033691

S/0193/64/000/004/0025/0027

AUTHOR: Vodop'yanov, A. A.; Futlikov, V. A.

TITLE: Modernization of horizontal-broaching machines

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 4, 1964, 25-27

TOPIC TAGS: broach, horizontal-broaching machine, improved design, hydraulic system, unification coefficient

ABSTRACT: The 1952 horizontal broaching machine models 7505, 7A510, and 7A520 were modernized in 1962 and are now produced as models 7A505, 7B510, and 7B520 differing only in size. The new design includes a special mechanism for swarf removal which formerly was accomplished manually, an improved hydraulic system to provide more uniform cutting speeds, and an improved tracking mechanism. The new models ensure higher performance, easier maintenance, and safer operation, and can be included in automatic lines. A high parts exchangeability coefficient and considerable savings have been effected by basing the new design on the assemblies used in vertical

Card 1/2



ACCESSION NR: AP4033691

broaching machines. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 000

OTHER: 000

Card 2/2

GLEKOV, S.F.; VODOP'YANOV, A.D.

The 7B520 horizontal broaching machine. Biul.tekh.-ekon.inform.Gos.-  
nauch.-issl.inst.nauch. i tekhn.inform. no.8:26-28 '62. (MIRA 15:7)  
(Broaching machines)

S/193/62/000/008/001/001  
A004/A101

AUTHORS: Glekov, S. F., Vodop'yanov, A. D.

TITLE: Model 7B520 (7B520) horizontal broaching machine

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 8, 1962, 26 - 28


TEXT: The Minskiy stankostroitel'nyy zavod im. S. M. Kirov (Minsk Machine Tool Plant im. S. M. Kirov) has manufactured the 7B520 horizontal broaching machine designed by the Special Designing Bureau No. 12. The machine is intended for broaching precision holes of different geometrical shape and dimensions. By using special devices it is possible to machine keyways and external surfaces. Since the change-over of the machine requires only a short time, it can be expediently used also in small-batch and piece production. In large-scale production with an automatic cycle the machine has a capacity of 45 - 170 components per hour, depending on the kind and dimensions of the workpieces to be machined. The 7B520 machine is manufactured in two models, one with and the other without attached bed. The first model is intended for operations with light broaches in piece or small batch production as well as for work requiring special adjustment. The surface finish attained at high speeds is up to  $\nabla 7$ . The second model is mounted on a bed.

Card 1/2

Model 7B 520 (7B520) horizontal broaching machine

S/193/62/000/008/001/001  
A004/A101

fitted with devices that make it possible to operate on an automatic cycle. The authors give a brief description of the main machine units and present the following technical specifications: Rated tractive force - 20 tons; length of stroke of the working carriage - 1,600 mm; length of stroke of the supporting roll - 600 mm (for the second model only); working stroke speed - from 1.5 - 11 m/min; maximum efficiency of the main drive hydraulic pump - 300 l/min; face plate hole diameter - 130 mm; main drive motor power - 20 kW; machine overall dimensions - 4,670 x 1,500 x 1,370 mm (the length of the second model is 6,835 mm); machine weight - 4,220 kg (that of the second model is 4,970 kg). The 7B520 broaching machine replaces the 7A520 model and, in comparison with the latter, possesses the following improvements: it is by 500 kg lighter and the surface area required has been reduced by 20%; its efficiency is by 15% higher, while servicing takes less time. In December 1961 the State Commission recommended the machine for the large-scale output. There is 1 figure.



Card 2/2

BUDANOV, V.P.; TARASOV, A.Ya.; VODOP'YANOV, A.I.

Knockmeter with phase indicator. Avt.i trakt.prom. no.4:15-17  
Ap '56. (MLRA 9:8)

1. Gor'kovskiy avtozavod imeni Molotova.  
(Automobiles--Engines--Testing)

ZONOV, G.B.; VODOP'YANOV, B.G.

Black-capped chickadees spending winter nights in rodent burrows.  
Dokl. Irk. gos. nauch.-issl. protivochum. inst. no.5:153-155 '63  
(MIRA 18:1)

ZONOV, G.B.; VODOP'YANOV, B.G.

Information on winter roosting of some birds in the Enkai Lake  
region. Nauch.dokl. vyz. shkoly; biol. nauki no.1:34-36 '66.  
(MIRA 19:1)

1. Rekomandovana Irkutskim nauchno-issledovatel'skim  
protivochumnym institutom. Submitted April 16, 1964.

VODOP'YANOV, F. A.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 398 - I

Call No.: TK6575.V6

BOOK

Author: VODOP'YANOV, F. A.

Full Title: RADAR

Transliterated Title: Radiolokatsiya

Publishing Data

Originating Agency: Bureau of Inventions, State Planning Commission  
of the USSR

Publishing House: Publishing House of the State Planning Commission

Date: 1946

Editorial Staff No. pp.: 150

No. of copies: 10,000

Editor: Yu. Kobzarev

Tech. Ed.: None

Editor-in-Chief: None

Appraiser: None

Others: None

Text Data

Coverage: A systematic exposition of the entire field of radio location and ranging of "passive" targets (as distinct from "active" targets, such as radio beacons, ranges, etc.). The author includes in this field radio goniometric stations (where the location of the target is determined from two or three points), automatic tracking stations, installations employing pulsed-radiation methods, and those employing continuous-radiation methods (phase-type, interference-type, and frequency-modulation range finders). The components and operating methods of each system are described in a general manner.

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Radiolokatsiya

AID 398 - I

The book is based on open patent and periodical literature of the pre-war period. The sources are almost exclusively foreign, although the author does give a few Soviet works in this field.

TABLE OF CONTENTS

Introduction.

1. Radar Installations
2. Pulse-Type Range Finders
3. Phase-Type Range Finders
4. Interference-Type Range Finders
5. Frequency-Type Range Finders

Purpose: Intended to present a systematized material on the basic methods of early radar development for the benefit of engineers and scientists

Facilities: None

No. of Russian and Slavic References: None

Available: Library of Congress

2/2

VEKSLER, V.I.; YEFREMOV, D.V.; MINTS, A.L.; VEYSBEYN, M.M.; YODOP'YANOV;  
F.A.; GASHEV, M.A.; ZEYDLITS, A.I.; IVANOV, P.P.; KOLOMENSKIY,  
A.A.; KOMAR, Ye.G.; MALYSHEV, I.P.; MONOSZON, M.A.; NEVIAZHSKIY,  
I.Kh.; PRUTKHOV, V.A.; RABINOVICH, M.S.; GUBCHINSKIY, S.M.; SI-  
NEL'NIKOV, K.D.; STOLOV, A.M.

Ten Bev energy synchrocyclotron built by the Academy of Sciences  
of the U.S.S.R. Atom.energ. no.4:22-30 '56. (MLBA 9:12)  
(Cyclotron)

VODOP'YANOV, F. A.

3

содн. А. А. Водоп'янов, А. А. Кудряков и др.

VODOP'YANOV, I. N.

"The Master Oscillator in the System Coupling the Accelerating Field Frequency and the Intensity of the Magnetic Field in the 10 Bev Synchrophasotron," by F. A. Vodop'yanov, Radio-tehnika i Elektronika, No 7, Jul 56, pp 928-939

A description is given of the wide band master oscillator in which the principle of the negative feedback was utilized by means of a precise frequency detector for stabilization of the modulating characteristics.

Persons who participated in the project were I. M. Gromov, Yu. F. Dushin, and V. N. Manin.

54M-1385

VODOPYANOV, F. A., MINTS, A. L., RUBCHINSKIY, S.M., VEYSBEYN, M.M., VASIL'YEV, A.A.

"Some Technical Characteristics of the 10 GeV Proton Synchrotron  
Electronic System," paper presented CERN Symposium, 1956, appearing in  
Nuclear Instruments, No. 1, pp. 21-30, 1957

VLADIMIRSKIY, V.V.; KOMAR, Ye.O.; MINTS, A.L.; GOL'DIN, L.L.;  
MONOSZON, N.A.; RUBCHINSKIY, S.M.; TARASOV, Ye.K.; VASIL'YEV, A.A.;  
VODOP'YANOV, F.A.; KOSHKAREV, D.G.; KURYSHV, V.S.; MALYSHEV, I.F.;  
STOLOV, A.M.; STREL'TSOV, N.S.; YAKOVLEV, B.M.

The 7 bev. proton synchrotron. Prib. i tekhn. eksp. 7 no.4:5-9  
Jl-Ag '62. (MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-  
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR,  
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury  
Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii  
SSSR i Radiotekhnicheskoy institut Gosudarstvennogo komiteta  
po ispol'zovaniyu atomnoy energii SSSR.  
(Synchrotron)

L0738

S/120/62/000/004/003/047  
E140/E420

24.6750

AUTHORS: Rubchinskiy, S.M., Batskikn, G.I., Vasil'yev, A.A.  
Vodop'yanov, F.A., Gutner, B.M., Kuz'min, A.A.,  
Kuz'min, V.F., Lebedev-Krasin, Yu.M., Uvarov, V.A.

TITLE: The electronic system of the 7 Gev proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 20-26

TEXT: The article surveys the electronic system of the 7 Gev proton synchrotron, the individual parts of which are described in individual articles in the same number of the journal. The electronic circuits control the continuous increase of the energy of the accelerated particles. For the chamber aperture used in the apparatus, the deviation of the momentum from the equilibrium value cannot exceed  $\pm 5 \times 10^{-3}$ . The instantaneous values of  $H$  must be held to within  $10^{-3}$  at the start ( $f = 0.67$  Mc/s) and  $5 \times 10^{-5}$  at the end of the acceleration cycle ( $f = 8.31$  Mc/s). The synchrotron frequency varies from 3600 to 130 c/s. To keep the oscillations of phase with passage through resonance less than the adiabatic damping of these oscillations, the harmonic frequency modulation of the accelerating potential by the synchrotron frequency should not exceed 0.5 c/s and the harmonic amplitude

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The electronic system of ...

S/120/62/000/004/003/047  
E140/E420

of the modulation at the same frequencies should be less than  $2 \times 10^{-4}$  at the start and  $5 \times 10^{-5}$  at the end of the cycle. The spectral density of noise modulation should be of the order of  $2 \times 10^{-3}$  cs<sup>2</sup>/cs. The precision of measuring H at the instant of injection was prescribed as  $3 \times 10^{-4}$ . These requirements are met by a programmed frequency control with correction for the radial and phase positions of the beam, calculated for beam intensities of  $10^8$  to  $10^{12}$  particles. The beam measuring system consists of a precise discrete integrator and a meter for the initial level of the magnetic field intensity. Special equipment is required for the automatic measurement of the instantaneous values of frequency and field intensity, the measurement of micromodulation of the frequency and amplitude of the accelerating potential, variations of beam intensity over the acceleration cycle, the azimuthal distribution of particle density in the bunch, and the position of the beam in the vacuum chamber. An overall block diagram of the system is given and also summary descriptions of the systems for generating the accelerating field, the acceleration control and the measuring equipment. The

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The electronic system of ...

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particles are accelerated at the seventh harmonic of their frequency of revolution - in the band from 0.67 to 8.31 Mc/s. The energy increase is 4.3 keV per revolution. The accelerating elements are 2.4 m drift tubes located in 11 compensating electromagnets. The transit angle in each tube is about 25° and the ratio of accelerating potential to the potential across the tube is about 0.43. The system ensures a phase oscillation of the beam below 0.05 r and stabilizes the radial position to within  $\pm 1$  mm. There is 1 figure. ✓

ASSOCIATION: Radiotekhnicheskiy institut GKAE  
(Radio Engineering Institute GKAE)

SUBMITTED: April 23, 1962

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E192/E382

24.6730

AUTHOR: Vodop'yanov, F.A.

TITLE: Precision driver generator for the system of  
programmed control of frequency of the accelerating  
field of the proton synchrotron

PERIODICAL: Pribery i tekhnika eksperimenta, no. 4, 1962,  
80 - 84

TEXT: The required frequency range from 590 kc/s to 8.31 Mc/s  
for the 7 GeV proton synchrotron with a frequency stability of the  
upper limit of  $8 \times 10^{-5}$  was achieved by using a system consisting  
of a ferrite-tuned LC-oscillator, a special wideband frequency  
multiplier and a heterodyne mixer. The LC-oscillator, which is  
modulated by the current from the programmer (p. 89 of this issue  
of the journal) is based on the Clapp circuit and its resonance  
system consists of 3 capacitors and a coil of variable inductance  
having a DC inductance of 75  $\mu$ H. The inductance coil is wound on  
a toroidal core with an initial permeability of 400. The  
oscillations from the cathode of the oscillator tube are applied

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Precision driver generator ....

via a buffer stage to an automatic gain-control (AGC) detector and an output cathode-follower. The output of the AGC detector is applied to a DC amplifier and then to the grid of the oscillator tube, so that the amplitude of the oscillations over the range of frequencies from 2.074 to 3.039 Mc/s varies less than  $\pm 6\%$ . The local oscillator (heterodyne) is based on a triode and is quartz-crystal-stabilised. Its signal is applied to a balanced mixer based on a double triode. The output of the mixer is terminated by a matched filter having a bandwidth ranging from 0.5 to 8.5 Mc/s. The signal from the filter is applied to a h.f. amplifier provided with AGC. The system is also furnished with automatic frequency control (AFC) which performs two operations during each cycle of the modulation signal: adjustment of the lower frequency and trimming of the upper frequency. The wide-band frequency multiplier comprises 3 diode frequency doublers with automatically tuned h.f. amplifiers and a wideband servo-amplifier tuned to the 8th harmonic (0.59 - 8.31 Mc/s) by means of a phase-type automatic tuning system.

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There are 1 figure and 1 table.

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